FIG. 1

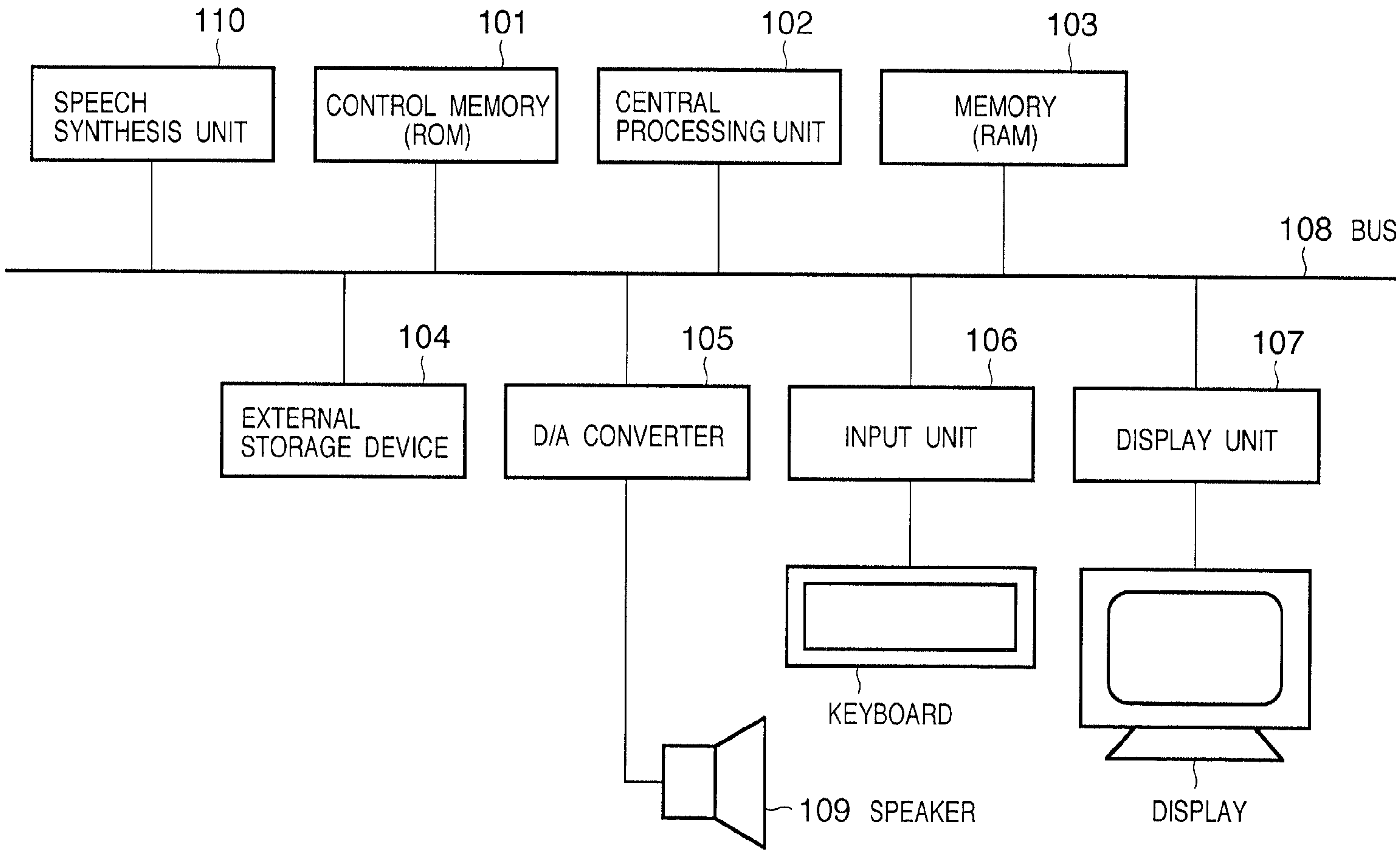


FIG. 2

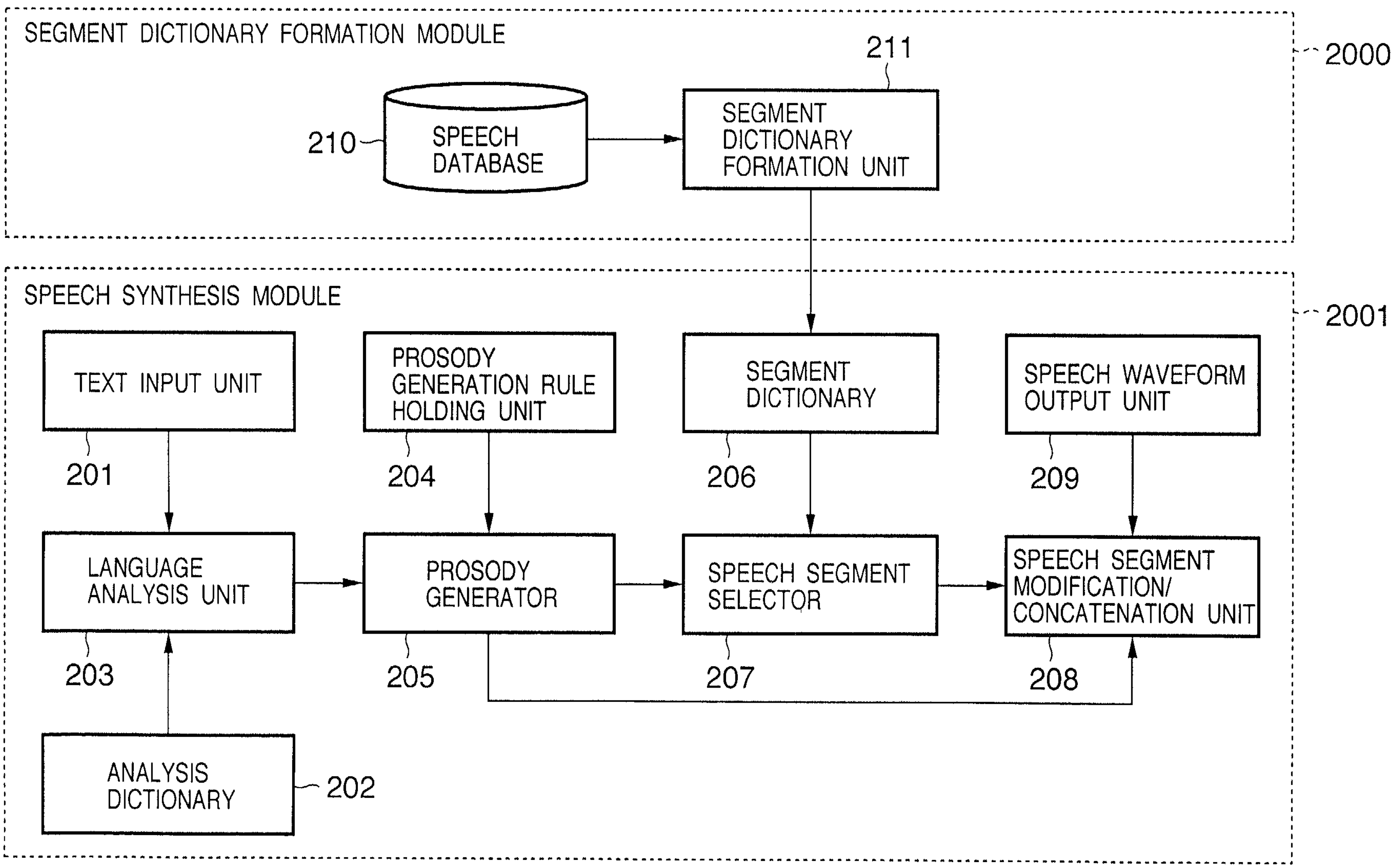

SEGMENT DICTIONARY FORMATION MODULE
2000
SPEECH DATABASE
210
SEGMENT DICTIONARY FORMATION UNIT
211
SPEECH SYNTHESIS MODULE
2001
TEXT INPUT UNIT
201
PROSODY GENERATION RULE HOLDING UNIT
204
SEGMENT DICTIONARY
206
SPEECH WAVEFORM OUTPUT UNIT
209
LANGUAGE ANALYSIS UNIT
203
PROSODY GENERATOR
205
SPEECH SEGMENT SELECTOR
207
SPEECH SEGMENT MODIFICATION/ CONCATENATION UNIT
208
ANALYSIS DICTIONARY
202

FIG. 3

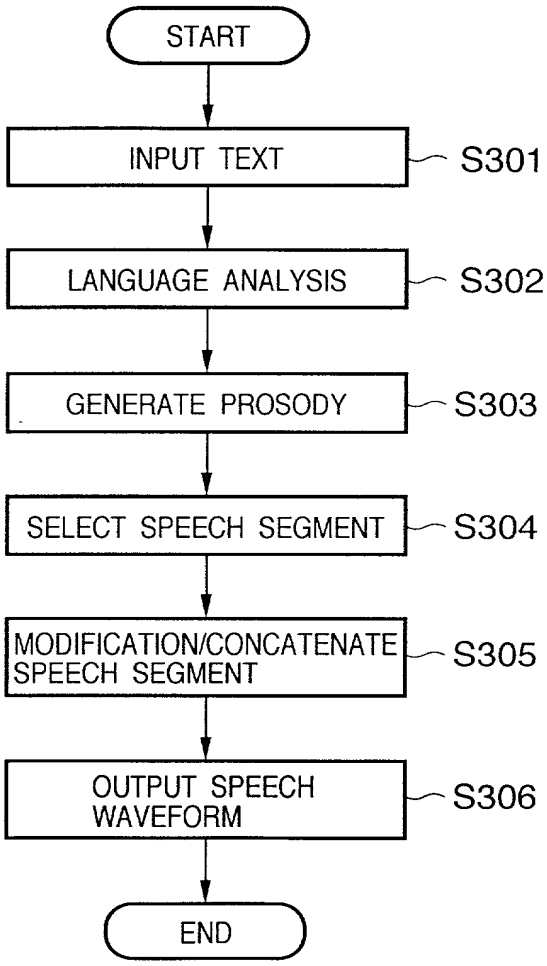

START
INPUT TEXT
S301
LANGUAGE ANALYSIS
S302
GENERATE PROSODY
S303
SELECT SPEECH SEGMENT
S304
MODIFICATION/CONCATENATE SPEECH SEGMENT
S305
OUTPUT SPEECH WAVEFORM
S306
END

FIG. 4

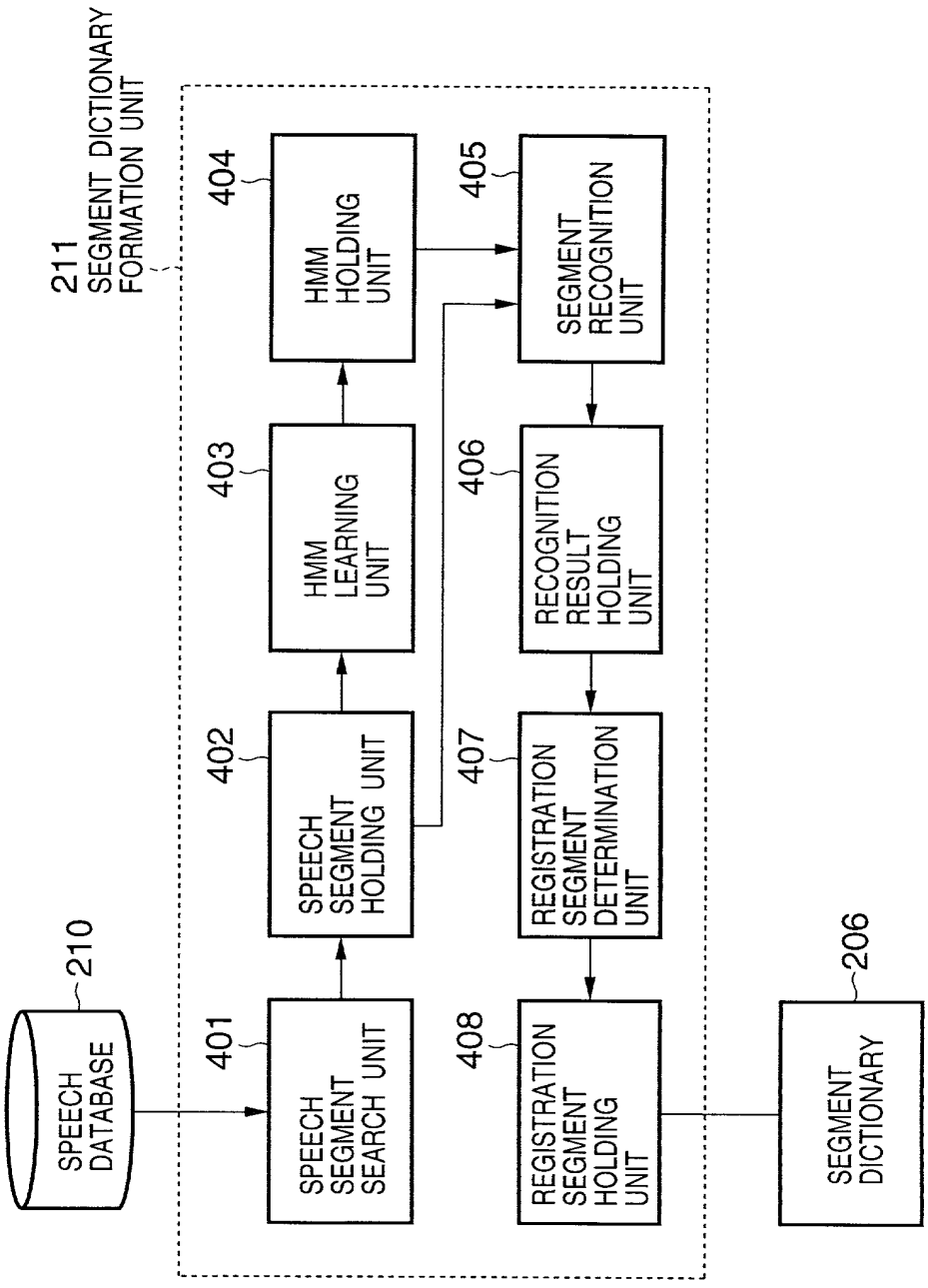

211
SEGMENT DICTIONARY FORMATION UNIT
210
SPEECH DATABASE
401
SPEECH SEGMENT SEARCH UNIT
402
SPEECH SEGMENT HOLDING UNIT
403
HMM LEARNING UNIT
404
HMM HOLDING UNIT
405
SEGMENT RECOGNITION UNIT
406
RECOGNITION RESULT HOLDING UNIT
407
REGISTRATION SEGMENT DETERMINATION UNIT
408
REGISTRATION SEGMENT HOLDING UNIT
206
SEGMENT DICTIONARY

FIG. 5

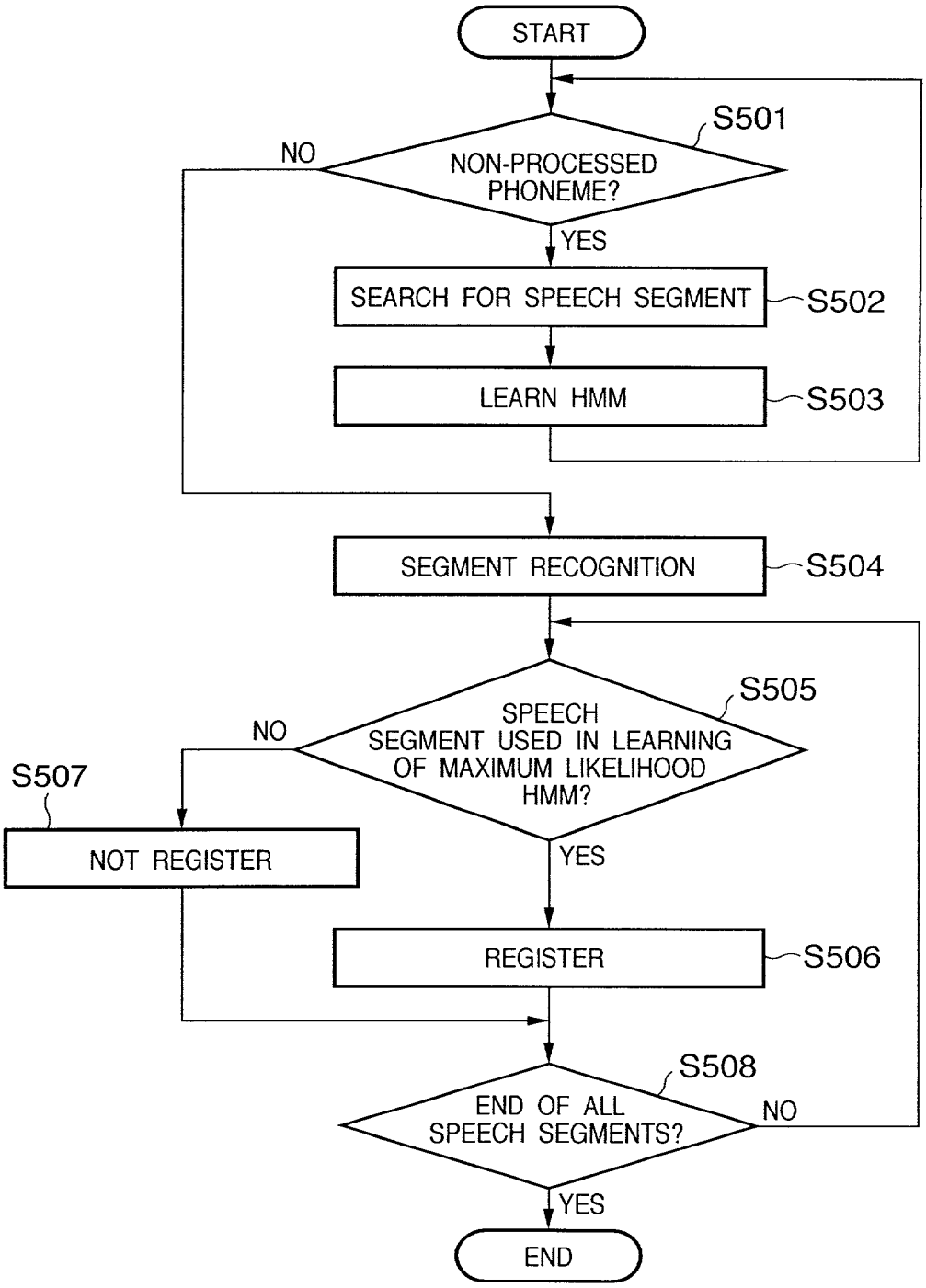
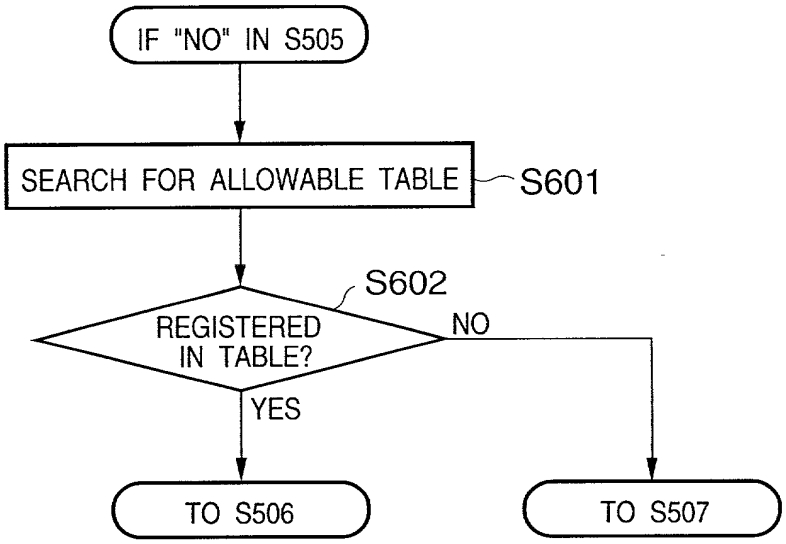

START
S501
NON-PROCESSED PHONEME?
NO
YES
SEARCH FOR SPEECH SEGMENT
S502
LEARN HMM
S503
SEGMENT RECOGNITION
S504
S505
SPEECH SEGMENT USED IN LEARNING OF MAXIMUM LIKELIHOOD HMM?
NO
S507
NOT REGISTER
YES
REGISTER
S506
S508
END OF ALL SPEECH SEGMENTS?
NO
YES
END

FIG. 6

RECOGNITION TARGET	ALLOWABLE PATTERN
a.y	a.i
a.k	a.pa.t
...	
i.n	...
...	

FIG. 7


IF "NO" IN S505
SEARCH FOR ALLOWABLE TABLE
S601
S602
REGISTERED IN TABLE?
NO
YES
TO S506
TO S507